

KW11-P
programmable
real-time clock
engineering drawings

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DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

SEQUENCE

SEQUENCE

THIS IS PRINT SET

REVISIONS	CHG. NO.	REV		USED ON OPTION/MODEL	DRN.	DATE	TITLE
					PELLEGRINI	7-21-72	
				CHK'D.	<i>check</i>	DATE 7-21-72	PROGRAMMABLE REAL
				PROJ/ENG.	<i>check</i>	DATE 7-31-72	TIME CLOCK (KW11-P-0)
				PROD.	<i>X Change</i>	DATE 7-31-72	
				FIELD SERV.	<i>in service</i>	DATE 8-2-72	
				SHEET 1 OF 2	DIST		

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY E.M.Pellegrini
DATE 6-6-72

ENG B. D. Weeks
DATE 7-31-72

• 100 •

CHECKED
DATE 7/20/72

PROD 5/1 -

DATE January

Digitized by srujanika@gmail.com

SECTION

ISSUED SECT

TITLE PROGRAMMABLE REAL TIME CLOCK	ASSY NO.	SIZE CODE A PL	NUMBER KW11-P-0	REV. *	ECO NO.
				SHEET 1 OF 1	DIST.

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NOTES:

1. PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE BACKPLANE. MODULE REFERENCE ALONE IS OBTAINED BY CONVERTING THE FIRST LETTER ACCORDING TO THE PIN NOMENCLATURE CHART AT RIGHT.

2. ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED; MULTIPLE NOTATIONS OF THE SAME SIGNALS WITHIN A MODULE HAVE THE PIN NOTED ON EACH. AN INPUT SIGNAL IS NOTED ONLY ONCE PER SHEET UNLESS SEPERATE PINS ARE USED.

MULTIPLE INPUTS ARE CONNECTED. MODULE OUTPUT SIGNALS ARE BROUGHT TO THE EXTREME RIGHT OF EACH SHEET.

3. SIGNAL SOURCE NOTATION (KW-2, FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE KW INDICATES THAT THE SOURCE IS IN THE KW11-P THE NUMBER INDICATES THE SHEET WITHIN THE SET. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED-OR" SITUATION AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.

4. FOR NORMAL OPERATION JUMPER J8 IS NOT INSTALLED.

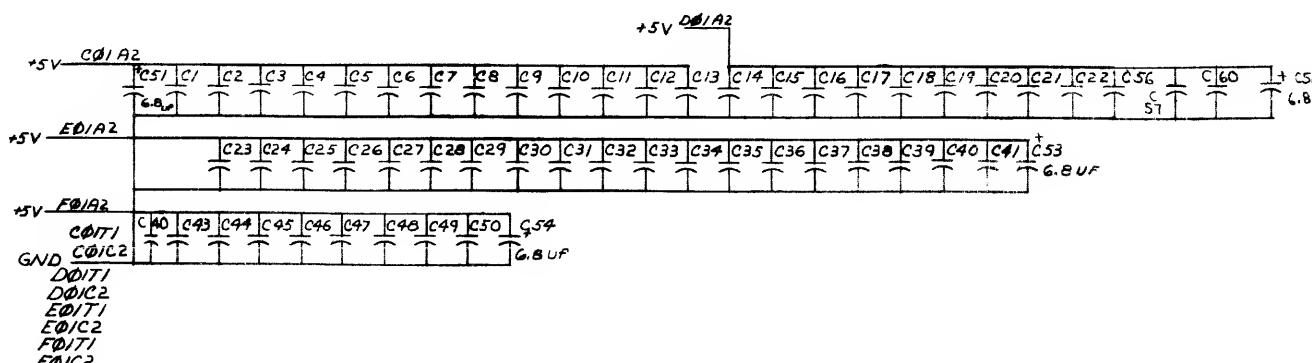
5. INSTALLATION PROCEDURE:
TO PROVIDE SIGNAL LTC L TO LINE FREQUENCY INPUT OF KW11-P ADD A 30 AWG WIRE FROM THE FOLLOWING PINS TO CE1 OF THE SLOT CHOSEN FOR INSTALLATION.

IN DD1: PIN A₀ 3 P2
IN KA1: PIN A₁ 3 P2

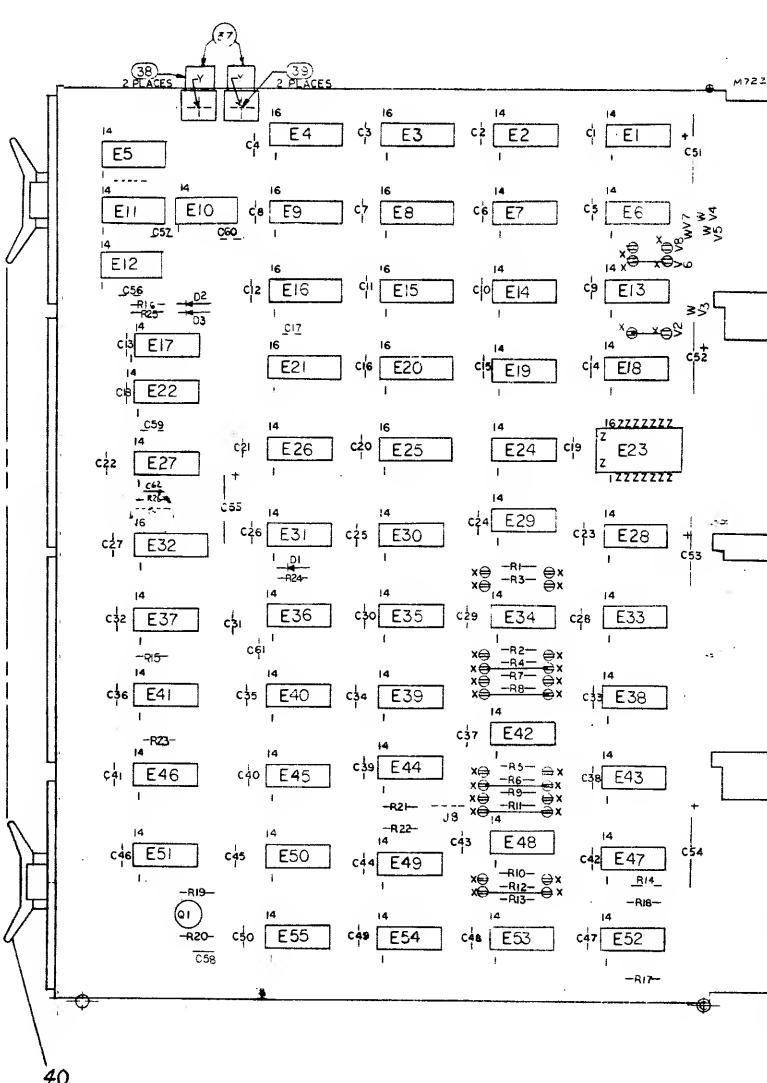
IN PDP 11/45: PIN C01D1.

IN PDP 11/45: PIN C01R1.

6. UNLESS OTHERWISE SPECIFIED, RESISTANCE IS IN OHMS, CAPACITANCE IS IN PICOFARADS. CAPACITORS WITHOUT ANY NOTED VALUES ARE .01 UF.



DEC 74153	PIN 8	PIN 16
DEC 74193	PIN 8	PIN 16
DEC 7490	PIN 10	PIN 5
DEC 8271	PIN 8	PIN 16
DEC 8640	PIN 1	PIN 8
IC TYPE	GND	+5V
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE		
IC PIN LOCATIONS		



PIN NOMENCLATURE
MODULE BACK PLANE

A

C

B

D

C

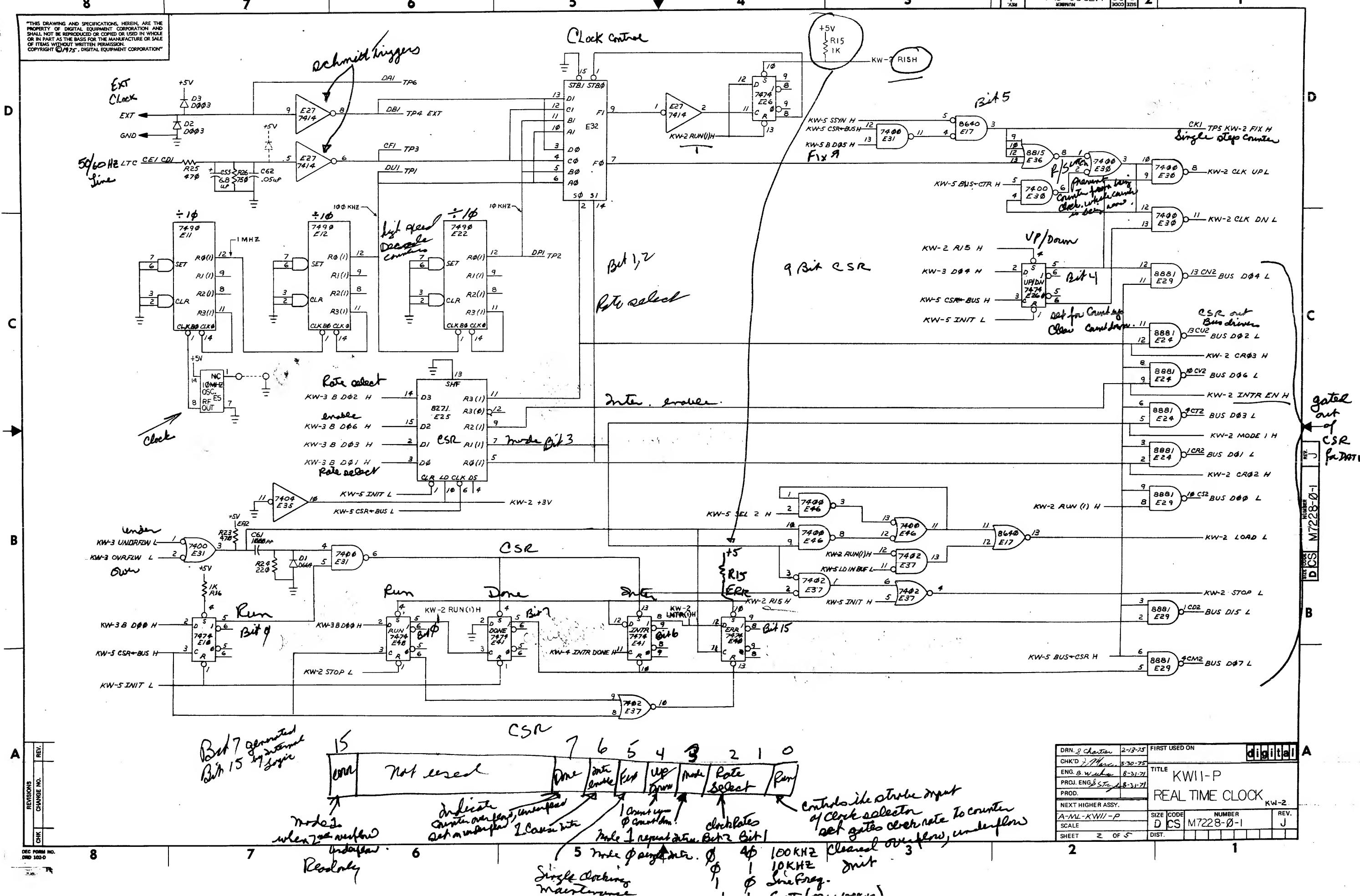
E

D

F

QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
FIRST USED ON OPTION MODEL				
	PDP11/20	ETCH BOARD REV. F	DRN. Schatzman DATE 2-19-75	
			CHK'D. Schatzman DATE 5-23-75	
			ENG. Schatzman DATE 5-23-75 TITLE KW11-P	
			PROJ. ENG. Schatzman DATE 5-23-75	
			PROD. Schatzman DATE 5-23-75	
PARTS LIST				
			digital	
			KW11-P REAL TIME CLOCK	
NEXT HIGHER ASSY				
A-M-KW11-P				
SIZE CODE M7228-2-1				
REV. J				
SCALE 1:1				
SHEET 1 OF 1				

DEC NO.	EIA NO.	DEC NO.	EIA NO.
SEMICONDUCTOR CONVERSION CHART			
REV. J			



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D

C

B

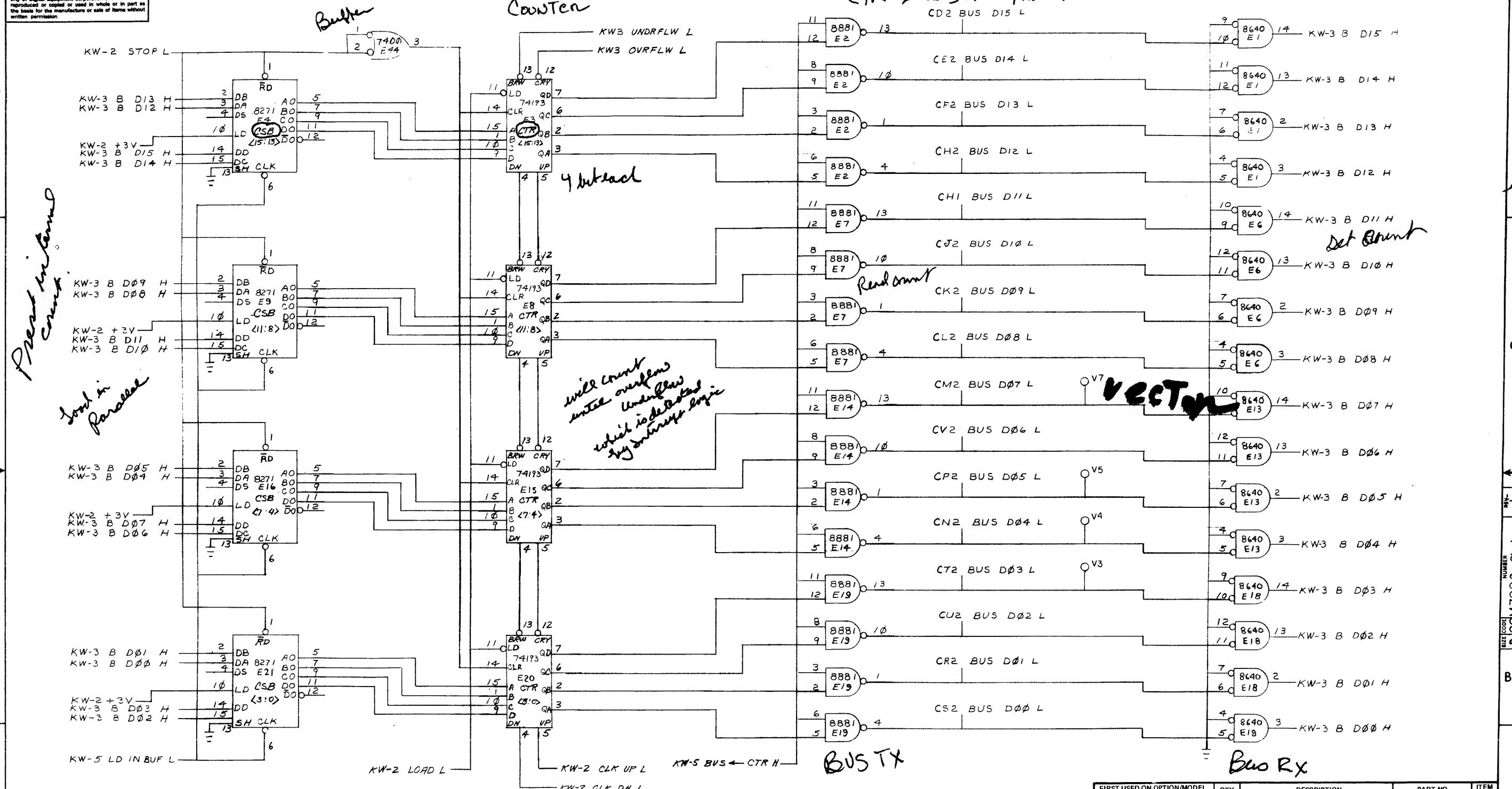
A

8 7 6 5 4 3 2 1

CTR → BUS A → KW11-P

CD2 BUS D15 L

1



REVISIONS	CHANGE NO.	REV.
CHK		

DEC FORM NO
DOD 102-B

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES.	DRN	DATE	digital	EQUIPMENT CORPORATION
TOLERANCES	CHK	DATE		MAYNARD MASSACHUSETTS
DECIMALS	ANGLES			
XXX = .005	±0° 30'			
XX = .02				
X = .1				
TITLE				
KW11-P REAL TIME CLOCK (KW-3)				
FINISH	SCALE NONE	SHEET 3 OF 5	DIST.	REV. J

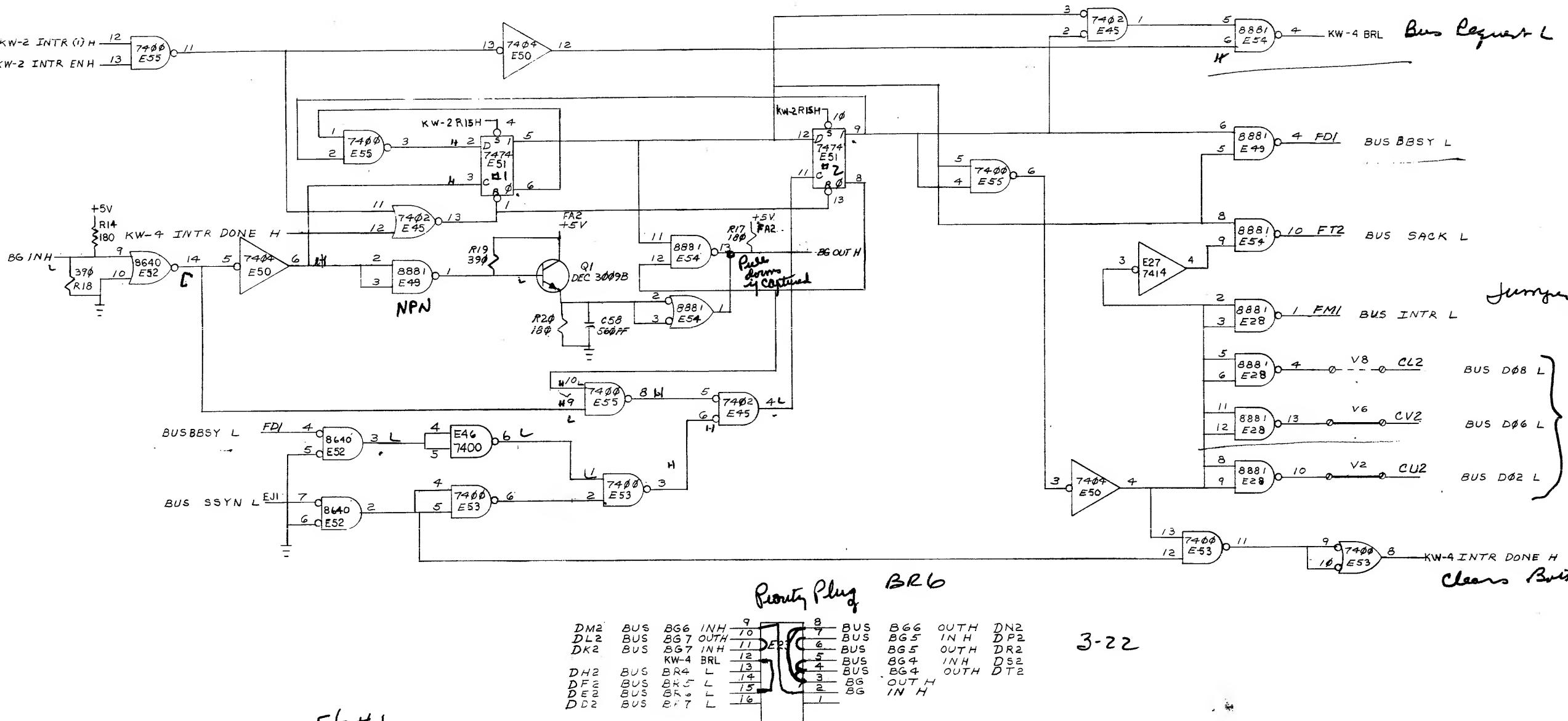
SIZE CODE **DCSM7228-0-1**

NUMBER **DCSM7228-0-1**

REV. **J**

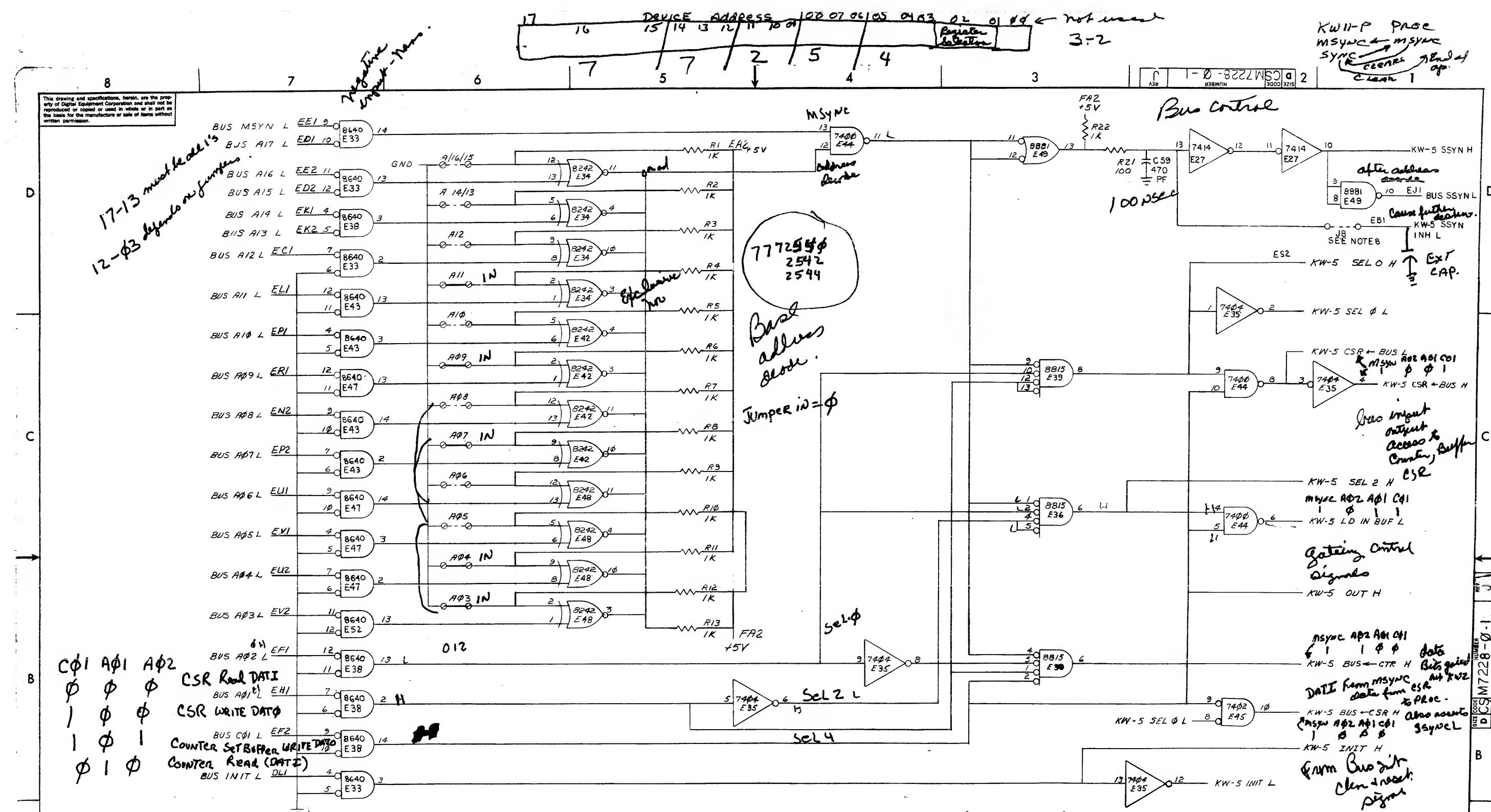
1 PWS

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REVISIONS	REV
CHANGE NO.	
CHK	

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN	Wilson	DATE	7-28-71
	CHK	Reed	DATE	8-13-71
DECIMALS	ANGLES	ENG.	DATE	8-21-71
.XXX - .006	±0° 30'	GP Wmbs	DATE	8-21-71
.XX - .02		PROD. Leng.	DATE	8-21-71
.X - .1		Stanger	DATE	8-21-71
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓				
MATERIAL	NEXT HIGHER ASSY.	EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS		
FINISH	SCALE NONE	digital		
	SHEET 4 OF 5	TITLE	KW11-P REAL TIME CLOCK (KW-4)	
	DIST.	SIZE CODE	NUMBER	REV.
		DCSM7228-0-1	J	



CPI used for Read, Write

Q1=Φ DATA transfer from Counter
CSR → Processor

$\phi_1=1$ DATA Data transfer from processor \rightarrow CSR
or Counter set Buffer (Except when KWDH-P
is getting a interrupt it operates as a Slave
with Processor as Master)

777540 = CSR

\mathcal{Q} = Count Buffer

$y = \text{Count}$

DATO address

254 indicate KW-11 P has been selected

Address Select Logic

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
				PARTS LIST
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. el. Towne	DATE 7-23-71	EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
	CHK'D <i>[Signature]</i>	DATE 8-3-71		
DECIMALS ANGLES	ENG. <i>[Signature]</i>	DATE 8-3-71	TITLE KW11-P	
XXX = .005 ± 0° 30'	PROF ENG. <i>[Signature]</i>	DATE 8-3-71	REAL TIME CLOCK (KW-5)	
XX = .02	PROD	DATE		
X = .1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓				
MATERIAL <i>II</i>	NEXT HIGHER ASSY.		SIZE CODE D CS	NUMBER M7228-Ø - I
FINISH <i>II</i>	SCALE NONE		REV. J	DIST.
	SHEET	5 OF 5		

